III. REMARKS

Claims 1-18 are pending in this application. By this Amendment, claims 1, 10 and 13 have been amended. These amendments are being made to facilitate early allowance of the presently claimed subject matter. Applicants do not acquiesce in the correctness of the rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Further, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority to the instant application. Reconsideration in view of the above amendments and following remarks is respectfully requested.

In the Office Action, claims 1, 4-9, 10-12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evans et al. (US PN 4,785,399); claim 2 is rejected under 35 U.S.C. §103 (a) as being unpatentable over Evans et al. in view of Woolbright (US PN 5,640,497); claim 3 is rejected under 35 U.S.C. §103(a) as being unpatentable over Evans et al. in view of Yasumoto et al. (US PN 4,849,921); and claims 13-18 are rejected under 35 U.S.C. §103(a) as being unpatentable over Evans et al. in view of Yasumoto et al. and Woolbright. Applicants submit that the pending claims are patentable and thus respectfully request withdrawal of the rejection.

First, Applicants submit that the cited prior art is non-analogous to the claimed invention. In particular, the Evans et al. disclosure "relates to computer modelling [sic] for process control . . . of shaping a geometric object by controlled cumulative translational sweeps, according to a parameterized operational raysets[.]" Col. 1, lines 8-11. "Shaping" is defined in Evans et al. as "a generic term in geometric modelling [sic], having many senses such as growing, shrinking, rounding, filleting, faceting, blending and smoothing." Col. 3, lines 27-29. Evans et al. cite application in collision-avoidance, growing and shrinking for the generation of blends,

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computing shape, and defining mechanical tolerances. Col. 3, lines 30-34. As best understood, the modeling in Evans et al. relates to the outside shape or appearance of an object as it is computationally moved/redrawn through sweeps to indicate growth or shrinkage, i.e., during computerized layout or during computerized evaluation of fabrication. Accordingly, Evans et al. relates to modeling of three-dimensional objects, i.e., generating algorithms of objects for computational study. In contrast, the claimed invention relates to data preparations used to build articles, e.g., masks, that are used to build a product, i.e., the objects in Evans et al. The claimed invention, accordingly, relates to substantially two-dimensional layers and how their overlaying changes the result of fabricating a product with them. Applicants have revised independent claims 1, 10 and 13 to clarify these varied applications. In addition, Yasumoto is related to "an arithmetic circuit for calculating the absolute value of the difference between a pair of input signals." Col. 1, lines 8-10. In Yasumoto, the polarity is an electrical polarity, not an optical polarity as described in the present invention. Further, Woolbright is related to "improvements in redesigning layouts[.]" Col. 1, lines 15-16. Layout design in which a circuit is actually designed is quite different to verifying design layers that generate the layout. In view of the foregoing, Applicants respectfully request withdrawal of the rejections.

Second, Applicants submit that Evans et al. fails to disclose or suggest all the claimed limitations. Further, Applicants respectfully submit that the Office's reliance on dispersed statements in Evans et al. is resulting in a misinterpretation of what Evans et al. actually is teaching. For example, Applicants submit that Evans et al. fail to disclose or suggest "restating the instruction algorithm in terms of at least two fundamental algorithms." In this regard, Applicants submit that the Office is misinterpreting col. 11, lines 6-23 of Evans et al. In that disclosure, Evans et al. discuss operational definitions that may be combined using Boolean logic

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to indicate growth versus shrinkage of an object as sweeps occur to computationally move or build the object. Hence, Evans et al. are combining algorithms, not restating an algorithm as at least two algorithms. Evans et al. never discloses or suggests that these operational definitions are a "restatement" of another algorithm. In fact, there is no discussion of an algorithm to be restated by the operational definitions.

Evans et al. also fail to disclose or suggest "combining the graphical representations corresponding to each fundamental algorithm according to the restated instruction algorithm to form a combined graphical representation[,]" as recited in independent claims 1, 10, and 13. Again, Evans et al. fails to disclose or suggest, *inter alia*, a restated instruction algorithm. In addition, Applicants respectfully submit that the Office is misinterpreting the cited language in Evans et al., i.e., col. 16, line 50 to col. 17, line 3. In that disclosure, the application of a grow operation to a composite union of underlying layers and then Boolean differencing the result and underlying composite results in a derivation of a layer, not a combination of layers. In particular, as shown in FIGS. 10a-d of Evans et al., the object of this operation is to model an object (FIG. 10a) and derive a new layer (FIG. 10d) that has been laid upon the rest of the object. Evans et al. conduct this operation by unioning (combining) all layers of the object (FIG. 10b), sweeping the union and deriving a new layer by Boolean differencing to remove the composite from the swept composite (FIG. 10c), resulting in the derived layer of FIG. 10d. In contrast, the claimed invention combines graphical representations of fundamental algorithms that are restatements of an instruction algorithm of a data preparation. In other words, the claimed invention is not interested in deriving a layer of the combination. Rather, it is the combination that is of interest. The object of this process is to determine whether the data preparation is correct, i.e., will it allow the desired product to be built with the article.

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Evans et al. also do not disclose or suggest, as the Office acknowledges, "determining whether the data preparation is correct based on the combined graphical representation." Applicants respectfully submit that the Office's interpretation of Evans et al. is strained in that the Evans et al. subjective determination of "when the user is satisfied," is inadequate for a data preparation as claimed. In Evans et al., the determination appears to simply be a visual analysis by the user of the generated object or a review of the algorithms (raysets), not a computational determination. In contrast, a visual review of the combined graphical representation or review of the algorithms of the claimed invention would never suffice to determine whether the data preparation of the claimed invention is correct to create the article. Even interpreting this step in it broadest sense, one must keep in mind that the data preparation is stated in terms of an instruction algorithm and the purpose of the claimed invention is to verify the data preparation, which is impossible by visual inspection of the combined graphical representation or review of the algorithm. As illustrated by FIGS. 4 and 5 of this application, it is impossible to determine that FIG. 5 results from FIG. 4 without computing a result. Accordingly, Applicants submit that Evans et al. fail to disclose or suggest the claimed invention. Further, Woolbright, Yasumoto and the other prior art of record fail to address these shortcomings of Evans et al. Thus Applicants respectfully request withdrawal of the above rejection.

Claims 2-9 are dependent upon claim 1, claims 11 and 12 are dependent upon claim 10, and claims 14-18 dependent upon claim 13. The dependent claims are believed to be allowable based on the above arguments, as well as for their own additional features.

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Applicants respectfully submit that the application is in condition for allowance. Should

the Examiner believe that anything further is necessary to place the application in better

condition for allowance, he is requested to contact Applicants' undersigned attorney at the

telephone number listed below.

Respectfully submitted,

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